(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 April 2002 (11.04.2002)

PCT

(10) International Publication Number
WO 02/29230 A1

(51) International Patent Classification[7]: F02D 41/14, 33/02, F02B 37/22

(21) International Application Number: PCT/JP01/07920

(22) International Filing Date:
12 September 2001 (12.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2000-306484 5 October 2000 (05.10.2000) JP
2000-309557 10 October 2000 (10.10.2000) JP

(71) Applicant *(for all designated States except US)*: **NISSAN MOTOR CO., LTD.** [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0023 (JP).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **SHIRAKAWA, Takashi** [JP/JP]; 2-92, Urago-cho, Yokosuka-shi, Kanagawa 237-0062 (JP).

(74) Agent: **GOTO, Masaki**; Shoyu-Kaikan, 3-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-0013 (JP).

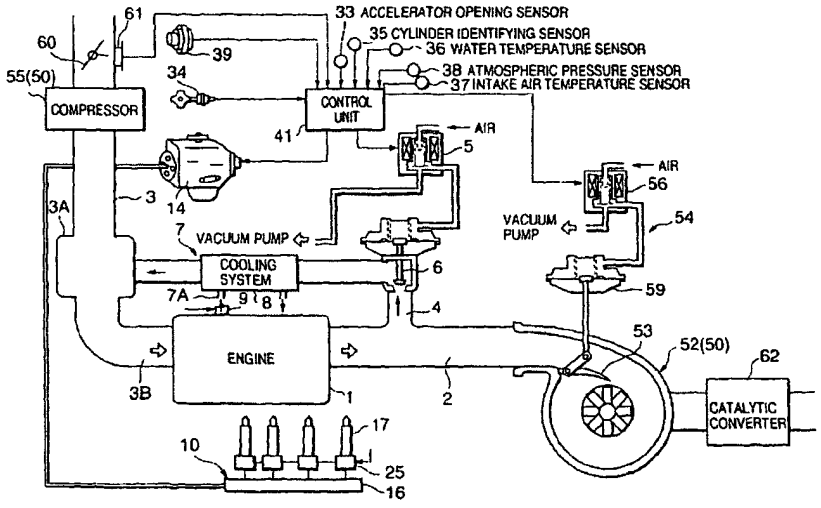
(81) Designated States *(national)*: CN, KR, US.

(84) Designated States *(regional)*: European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CONTROL OF TURBOCHARGER



(57) Abstract: A fresh air amount of an engine (1) is controlled by a variable nozzle (53) of a turbocharger (50). A controller (41) calculates an open loop control value of a drive signal of a variable nozzle (53) based on the running state of the engine (1). A target intake fresh air amount of the engine (1) is calculated based on the running state, and a processing value obtained by smoothing the target intake fresh air amount value is calculated (S132). A feedback control value of the drive signal is calculated so that a real intake fresh air amount coincides with the processing value (S367). The variable nozzle (53) is controlled based on the open loop value and feedback control value. By using the processing value as the target value of the feedback control, unstable factors in feedback control resulting from the time delay from operation of the variable nozzle (53) to change of the intake fresh air amount aspirated by the engine (1), are eliminated.

WO 02/29230 A1